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CLAIMS:

What is claimed is:

- 1 1. A process for providing an interface to a client for
2 manipulating container managed persistence beans, the
3 process comprising the data processing system implemented
4 steps of:
5 receiving a call from a client to manipulate an
6 instance of a container managed persistence bean, wherein
7 the call is received using a set of generated code,
8 wherein the set of generated code is designed to perform
9 bean specific functions including bean specific methods
10 for a bean type, managing input parameters for the bean
11 specific methods, processing a result of bean finders,
12 and interfacing with a backend; and
13 processing the call through a set of calls between
14 the set of generated code and the runtime code, wherein
15 the runtime code performs the functions, which are
16 performed in a manner that is nonspecific to a bean type;
17 and
18 returning a result to the client.
- 1 2. The process of claim 1, wherein the instance of a
2 container managed persistence bean is manipulated using a
3 set of bean specific methods that apply to an instance of
4 the container manage persistence bean.
- 1 3. The process of claim 1, wherein the set of generated
2 code includes a concrete bean, a bean adapter binding,

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3 and injector, an extractor, a function set, and a data
4 cache entry.

1 4. The process of claim 1, wherein the backend is a
2 database or other data storage system.

1 5. The process of claim 2, wherein the set of bean
2 specific methods includes creating, storing, deleting and
3 finding a bean.

1 6. The process of claim 3, wherein the bean adaptor
2 binding, the extractor and the function set is specific
3 to a backend.

1 7. The process of claim 1, wherein processing a result
2 of bean finders includes extracting data from the backend
3 and converting the data into a format used by the
4 instance of a container managed persistence bean.

1 8. The process of claim 1, wherein managing input
2 parameters for the bean specific methods includes
3 converting input parameters from a format used by the
4 instance of a container managed persistence bean to a
5 formatted input for use in accessing a backend when
6 called by the runtime code.

1 9. A container managed persistence entity bean system
2 comprising:

3 runtime code, wherein the runtime code provides
4 functions to a plurality of bean types;

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5 a concrete bean, wherein the concrete bean receives
6 requests from a client to manipulate an instance of a
7 container managed persistence bean and manipulates the
8 instance of the container managed persistence bean when
9 called by the client by calling the runtime code;
10 an injector, wherein the injector converts input
11 parameters from a format used by the concrete bean into a
12 formatted input for use in accessing a backend when
13 called by the runtime code;
14 a bean adapter binding, wherein the bean adapter
15 binding provides access to bean specific information for
16 a particular container managed persistence bean by
17 providing the at least one of the injector, the
18 extractor, and bean method information to the runtime
19 code in response to a call from the runtime code for
20 access;
21 a function set, wherein the function set provides
22 access to a backend in response to being called by the
23 runtime, wherein the functions set uses the formatted
24 input created by the injector to access the backend;
25 an extractor, wherein the extractor receives data
26 for a given instance of a container managed persistence
27 bean from the backend data structure and formats data
28 into a format used by the concrete bean; and
29 a data cache entry, wherein the data caches entry
30 holds data received by the extractor and wherein the data
31 is data for a given instance of a container managed
32 persistence bean.

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1 10. The container managed persistence entity bean system
2 of claim 9, wherein the concrete bean receives requests
3 to locate container managed persistence beans and
4 processes the requests by calling the runtime code;

1 11. The container managed persistence entity bean system
2 of claim 10, wherein the concrete bean locates a bean by
3 finding a bean.

1 12. The container managed persistence entity bean system
2 of claim 10, wherein the concrete bean locates a specific
3 container managed persistence bean instance by creating a
4 container managed persistence bean associated with a bean
5 type, but not associated with a specific bean instance.

1 13. The container managed persistence entity bean system
2 of claim 9, wherein the runtime code includes functions
3 that are shared by a plurality of container managed
4 persistence beans.

1 14. The container managed persistence entity bean system
2 of claim 9, wherein the data includes at least one of a
3 Java primitive and an object reference.

1 15. The container managed persistence entity bean system
2 of claim 9, wherein the backend is a database or other
3 data storage system.

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1 16. The container managed persistence entity bean system
2 of claim 9, wherein the concrete bean includes a custom
3 bean type.

1 17. The container managed persistence entity bean system
2 of claim 9, wherein the runtime code is shared by the
3 plurality of bean types.

1 18. The container managed persistence entity bean system
2 of claim 9, wherein the function set executes bean-
3 specific, backend specific data access logic.

1 19. The container managed persistence entity bean system
2 of claim 9, wherein in response to receiving requests
3 from a client to manipulate an instance of a container
4 managed persistence bean, the concrete bean manipulates
5 the instance of the container managed persistence bean
6 when called by the client by calling the inherited bean
7 specific functions prior to calling the runtime code.

1 20. The container managed persistence entity bean system
2 of claim 19, wherein the inherited bean specific
3 functions is written by a specific bean type provider.

1 21. The container managed persistence entity bean system
2 of claim 19, wherein the inherited bean specific
3 functions performs additional logic.

1 22. A computer program product in a computer readable
2 medium for providing an interface to a client for

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3 manipulating container managed persistence beans, the
4 process comprising the data processing system implemented
5 steps of:

6 first instructions for receiving a call from a
7 client to manipulate an instance of a container managed
8 persistence bean, wherein the call is received using a
9 set of generated code, wherein the set of generated code
10 is designed to perform bean specific functions including
11 bean specific methods for a bean type, managing input
12 parameters for the bean specific methods, processing a
13 result of bean finders, and interfacing with a backend;
14 and

15 second instructions for processing the call through
16 a set of calls between the set of generated code and the
17 runtime code, wherein the runtime code performs the
18 functions, which are performed in a manner that is
19 nonspecific to a bean type; and

20 third instructions for returning a result to the
21 client.

1 23. The computer program product of claim 22, wherein
2 the instance of a container managed persistence bean is
3 manipulated using a set of bean specific methods that
4 apply to an instance of the container manage persistence
5 bean.

1 24. The computer program product of claim 22, wherein
2 the set of generated code includes a concrete bean, a
3 bean adapter binding, and injector, an extractor, a
4 function set, and a data cache entry.

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1 25. The computer program product of claim 22, wherein
2 the backend is a database or other data storage system.

1 26. The computer program product of claim 24, wherein
2 the set of bean specific methods includes creating,
3 storing, deleting and finding a bean.

1 27. The computer program product of claim 22, wherein
2 the bean adaptor binding, the extractor and the function
3 set is specific to a backend.

1 28. The computer program product of claim 22, wherein
2 processing a result of bean finders includes extracting
3 data from the backend and converting the data into a
4 format used by the instance of a container managed
5 persistence bean.

1 29. The computer program product of claim 22 wherein
2 managing input parameters for the bean specific methods
3 includes converting input parameters from a format used
4 by the instance of a container managed persistence bean
5 to a formatted input for use in accessing a backend when
6 called by the runtime code.